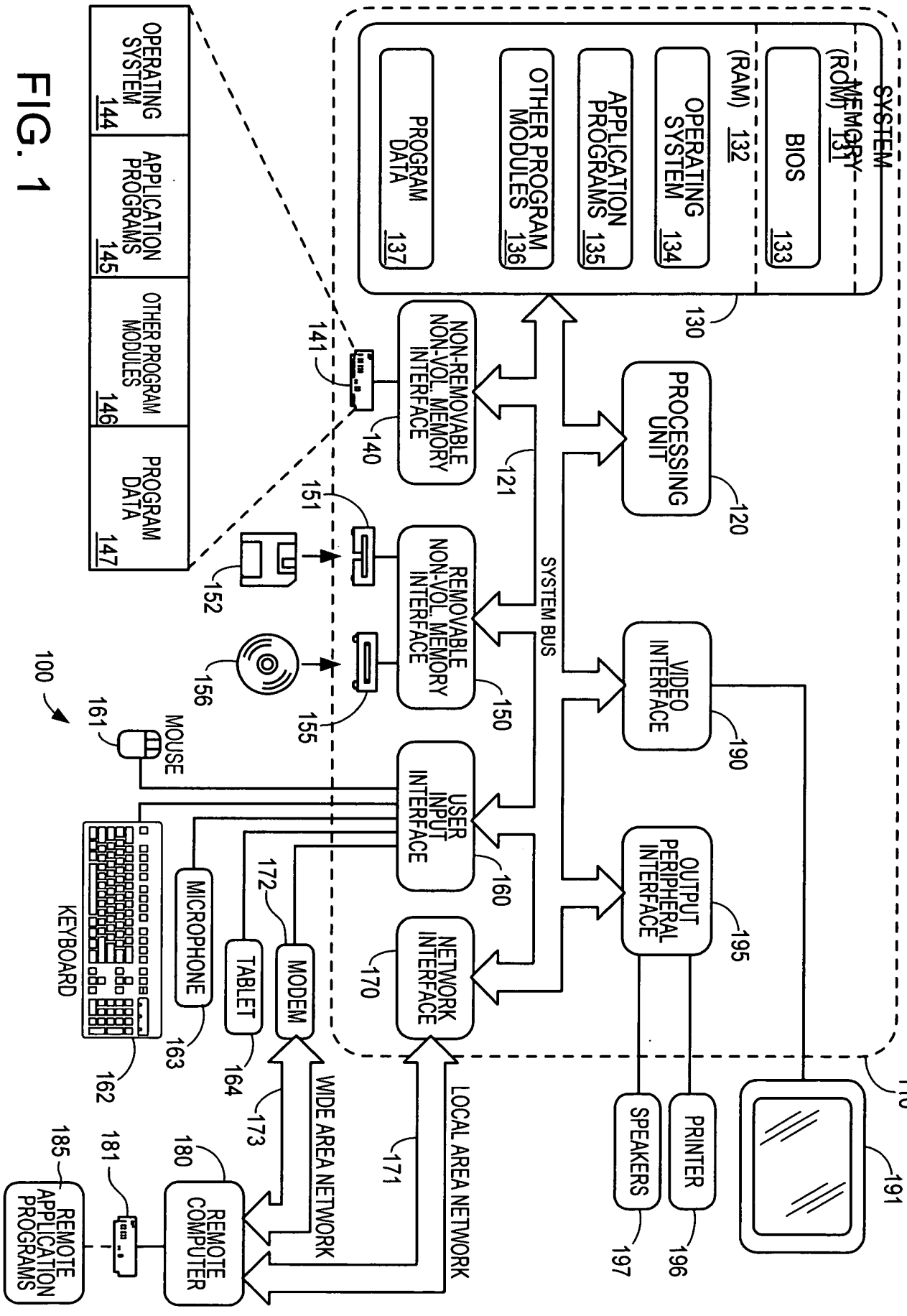

SYSTEM MEMORY
(ROM) 131
BIOS 133
(RAM) 132
OPERATING SYSTEM 134
APPLICATION PROGRAMS 135
OTHER PROGRAM MODULES 136
PROGRAM DATA 137
130
PROCESSING UNIT
120
SYSTEM BUS
121
NON-REMOVABLE NON-VOL. MEMORY INTERFACE
140
141
REMOVABLE NON-VOL. MEMORY INTERFACE
150
151
152
155
156
VIDEO INTERFACE
190
OUTPUT PERIPHERAL INTERFACE
195
NETWORK INTERFACE
170
USER INPUT INTERFACE
160
MOUSE
161
100
KEYBOARD
162
MICROPHONE
163
TABLET
164
MODEM
172
WIDE AREA NETWORK
173
LOCAL AREA NETWORK
171
REMOTE COMPUTER
180
181
185
REMOTE APPLICATION PROGRAMS
110
191
PRINTER
196
SPEAKERS
197
OPERATING SYSTEM 144
APPLICATION PROGRAMS 145
OTHER PROGRAM MODULES 146
PROGRAM DATA 147

FIG. 1

FIG. 2

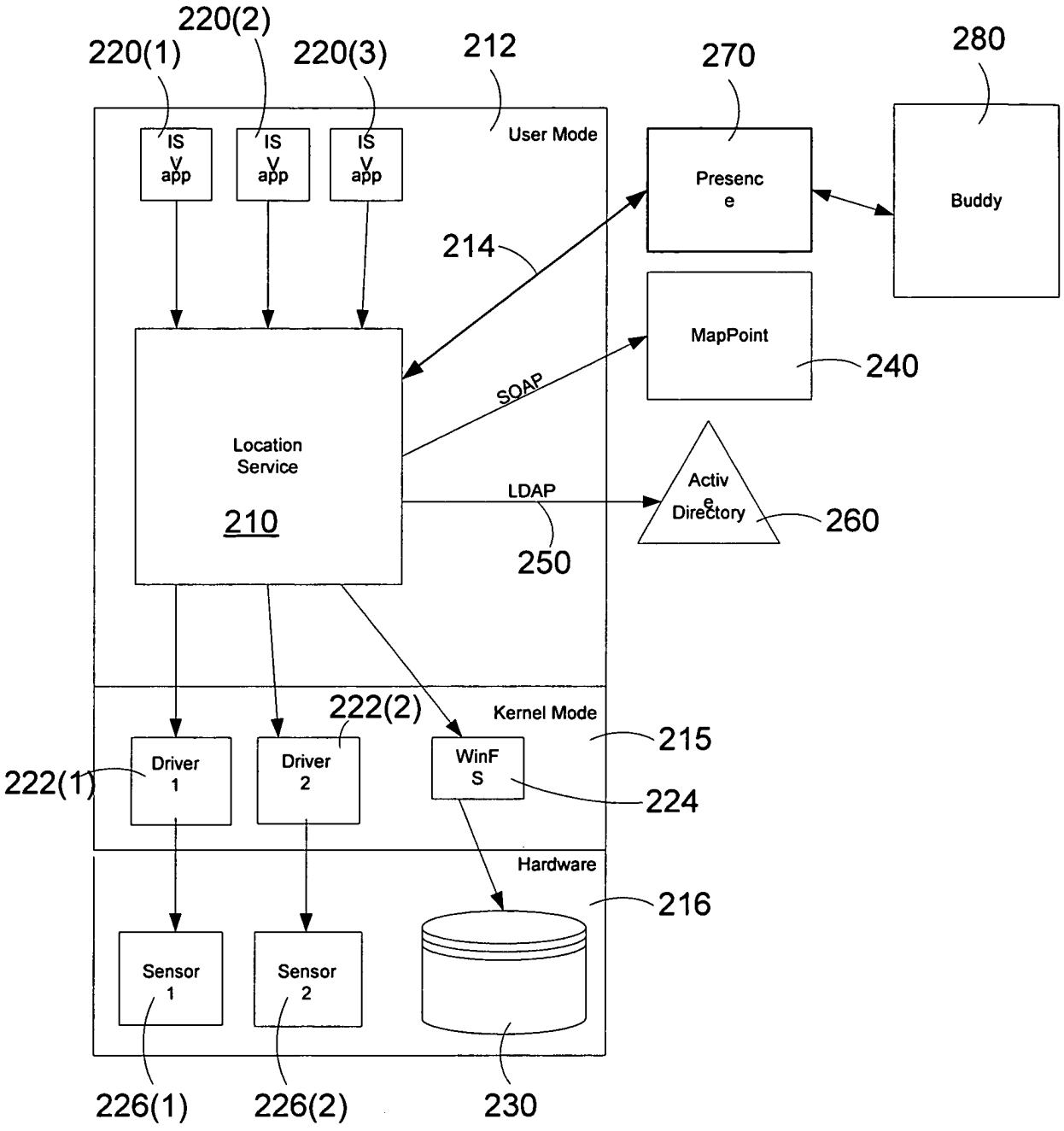
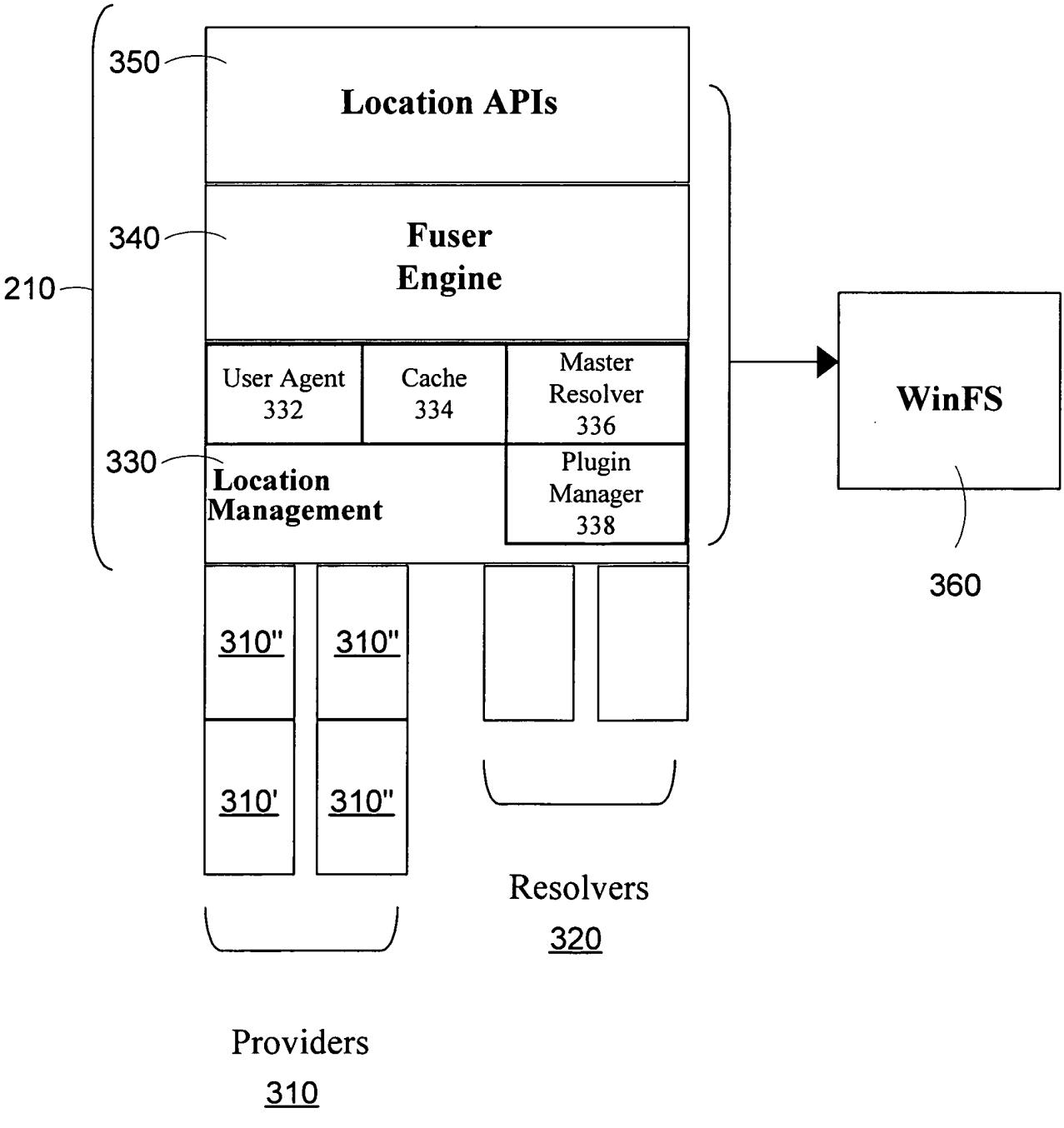

220(1)
220(2)
220(3)
212
270
280
User Mode
IS V app
IS V app
IS V app
Presenc e
Buddy
214
MapPoint
240
SOAP
Location Service
210
LDAP
Activ e Directory
260
250
Kernel Mode
222(2)
215
222(1)
Driver 1
Driver 2
WinF S
224
Hardware
216
Sensor 1
Sensor 2
226(1)
226(2)
230

FIG. 3


350
Location APIs
340
Fuser Engine
210
User Agent 332
Cache 334
Master Resolver 336
330
Location Management
Plugin Manager 338
WinFS
360
310"
310"
310'
310"
Resolvers
320
Providers
310

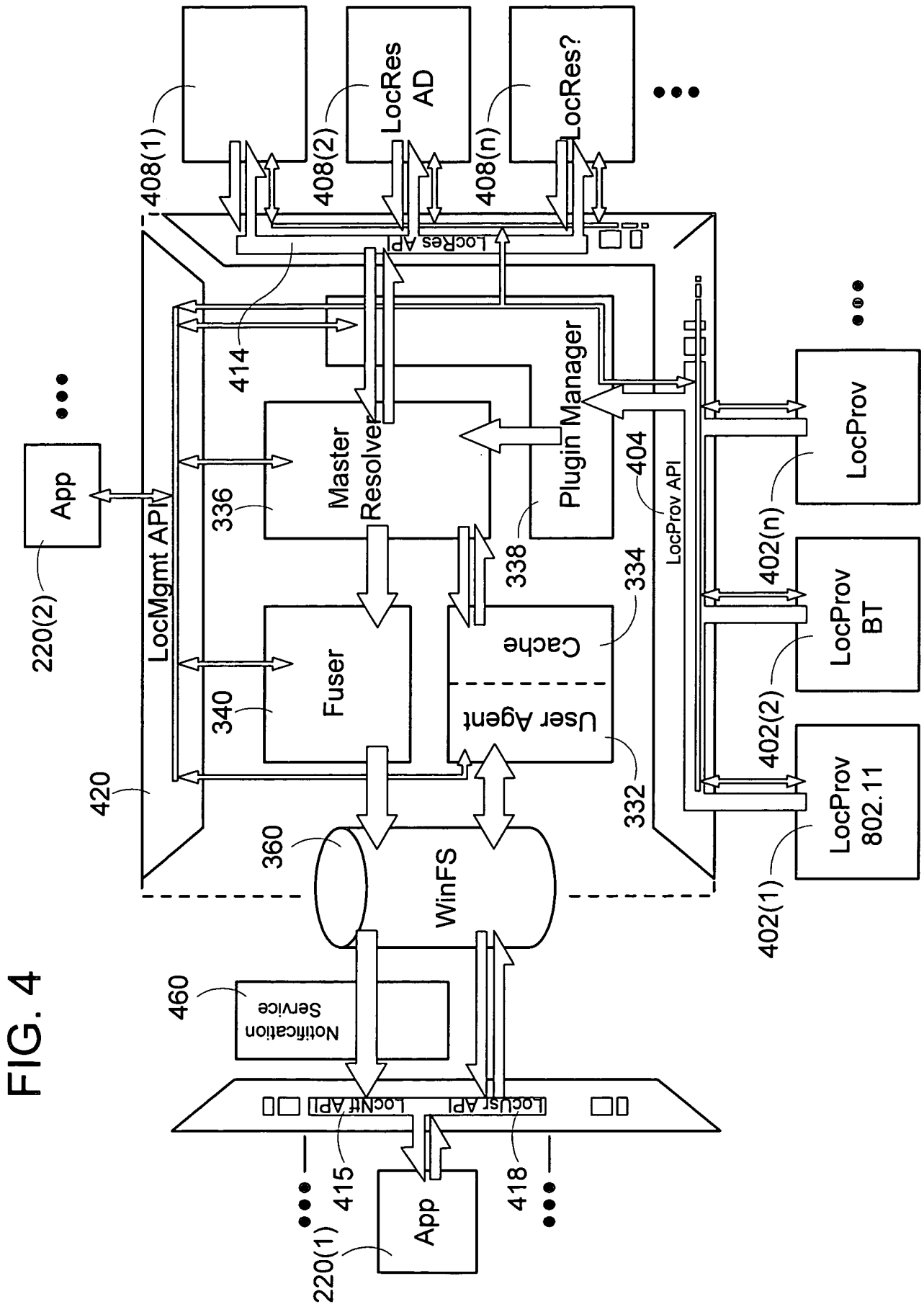

408(1)
408(2)
LocRes AD
408(n)
LocRes?
LocRes API
414
Master Resolver
Plugin Manager
404
LocProv API
LocProv
LocProv BT
LocProv 802.11
402(n)
402(2)
402(1)
App
220(2)
LocMgmt API
336
338
334
Cache
User Agent
332
Fuser
340
420
360
WinFS
460
Notification Service
LocNtf API
LocUsr API
415
418
App
220(1)

FIG. 4

FIG. 5A

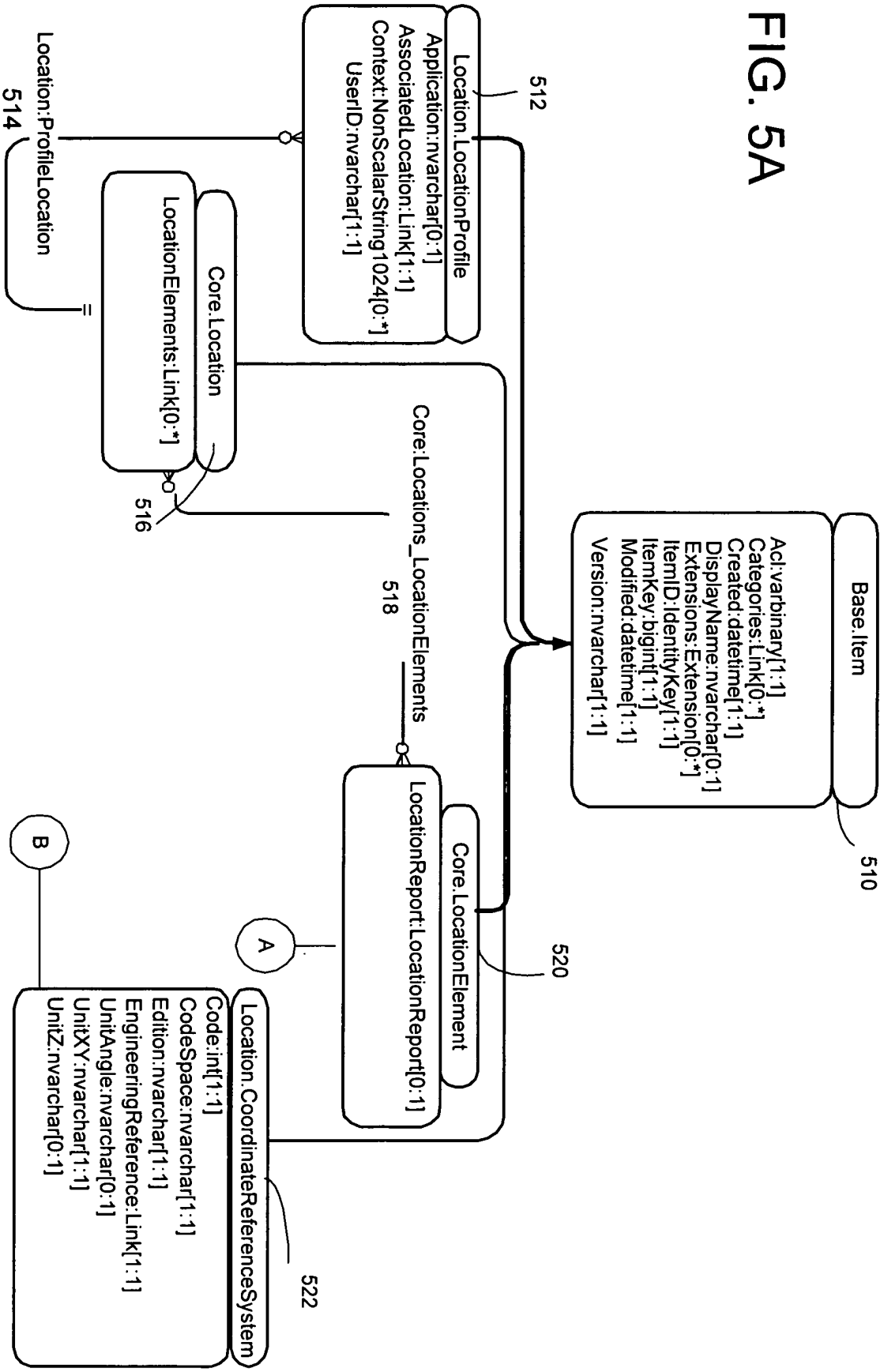
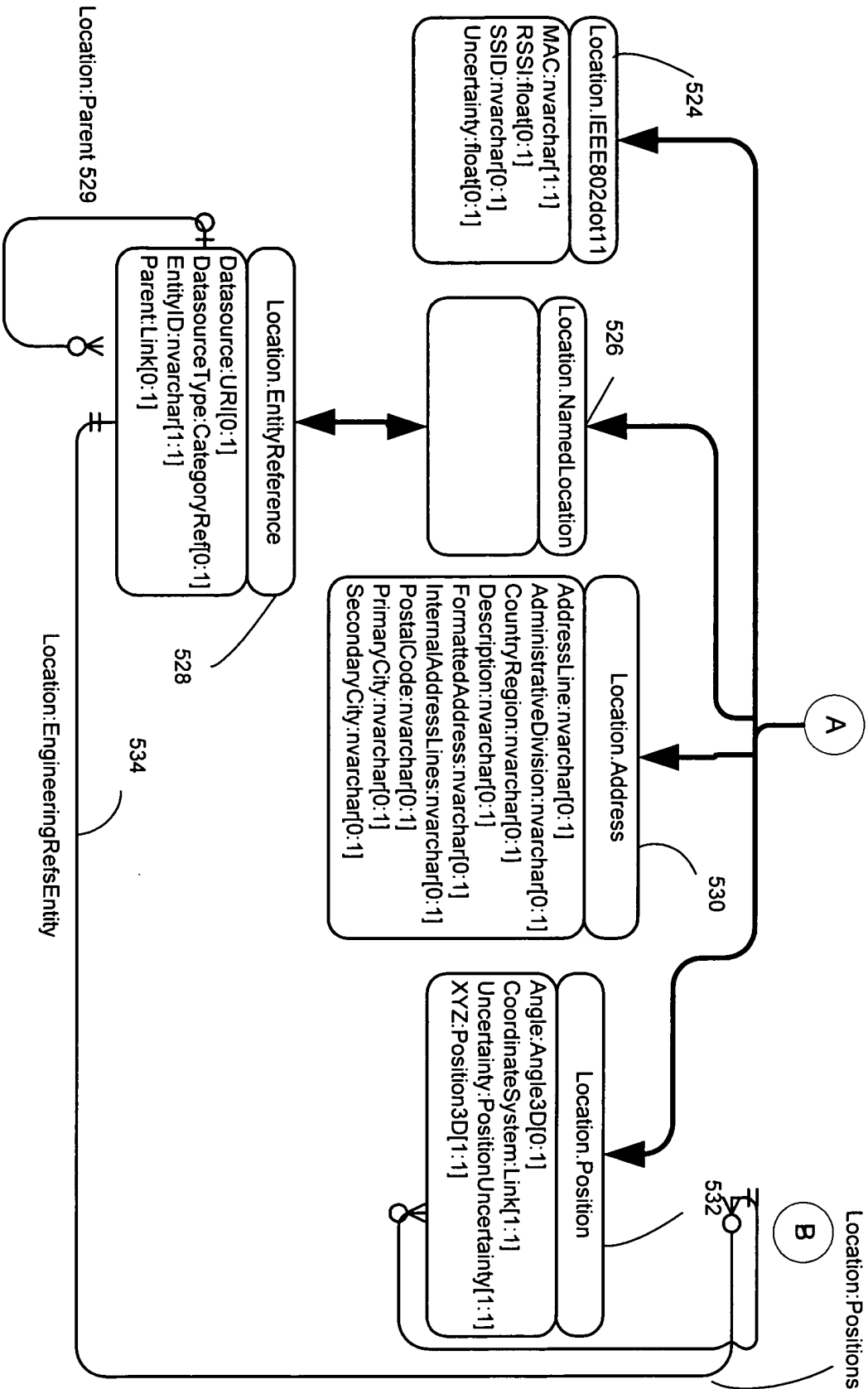

Base.Item
Acl:varbinary[1:1]
Categories:Link[0:*]
Created:datetime[1:1]
DisplayName:nvarchar[0:1]
Extensions:Extension[0:*]
ItemID:IdentityKey[1:1]
ItemKey:bigint[1:1]
Modified:datetime[1:1]
Version:nvarchar[1:1]
510
Core.LocationElement
520
Location.LocationProfile
512
Application:nvarchar[0:1]
AssociatedLocation:Link[1:1]
Context:NonScalarString1024[0:*]
UserID:nvarchar[1:1]
Core.Locations_LocationElements
518
LocationReport:LocationReport[0:1]
Core.Location
LocationElements:Link[0:*]
516
Location:ProfileLocation
514
A
B
Location.CoordinateReferenceSystem
522
Code:int[1:1]
CodeSpace:nvarchar[1:1]
Edition:nvarchar[1:1]
EngineeringReference:Link[1:1]
UnitAngle:nvarchar[0:1]
UnitXY:nvarchar[1:1]
UnitZ:nvarchar[0:1]

FIG. 5B


Location.IEEE802dot11
MAC:nvarchar[1:1]
RSSI:float[0:1]
SSID:nvarchar[0:1]
Uncertainty:float[0:1]
524
Location.NamedLocation
526
Location.EntityReference
Datasource:URI[0:1]
EntityID:nvarchar[1:1]
Parent:Link[0:1]
528
Location:Parent 529
Location:EngineeringRefsEntity
534
A
Location.Address
AddressLine:nvarchar[0:1]
AdministrativeDivision:nvarchar[0:1]
CountryRegion:nvarchar[0:1]
Description:nvarchar[0:1]
FormattedAddress:nvarchar[0:1]
InternalAddressLines:nvarchar[0:1]
PostalCode:nvarchar[0:1]
PrimaryCity:nvarchar[0:1]
SecondaryCity:nvarchar[0:1]
530
Location.Position
Angle:Angle3D[0:1]
CoordinateSystem:Link[1:1]
Uncertainty:PositionUncertainty[1:1]
XYZ:Position3D[1:1]
532
B
Location:PositionsCoordSystem

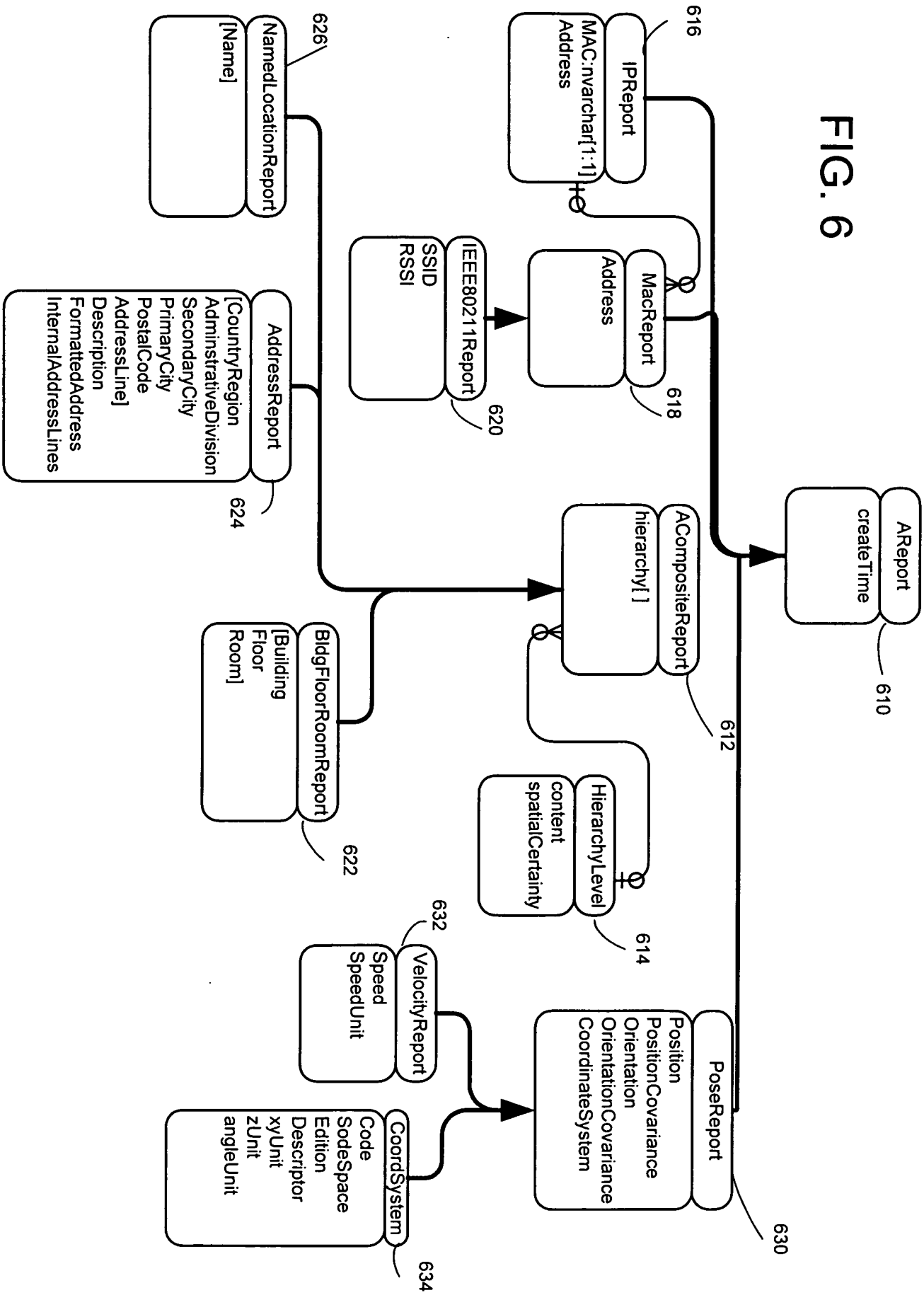
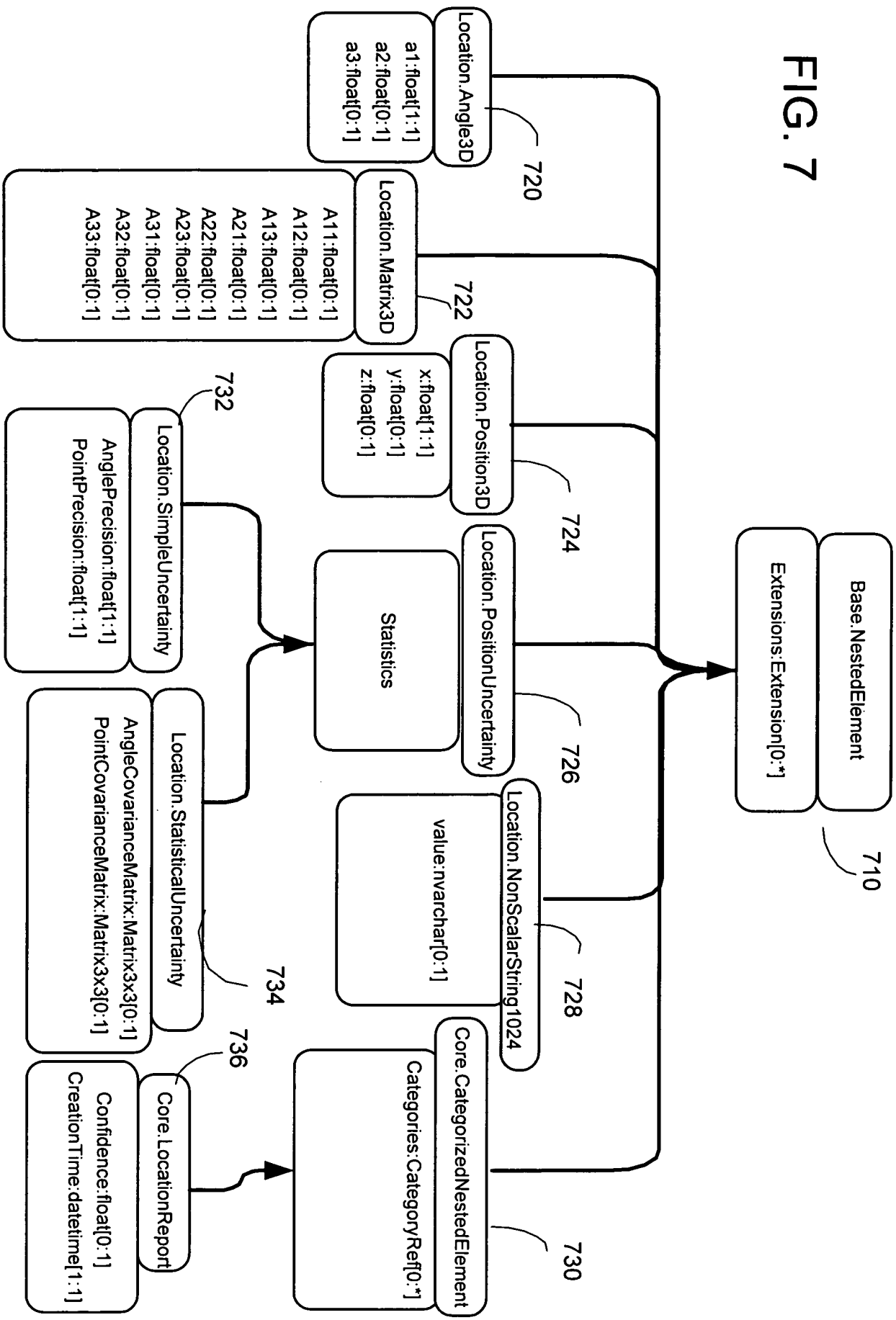

AReport
createTime
610
ACompositeReport
hierarchy[ ]
612
PoseReport
Position
PositionCovariance
Orientation
OrientationCovariance
CoordinateSystem
630
HierarchyLevel
content
spatialCertainty
614
IPReport
MAC:nvarchar[1:1]
Address
616
MacReport
Address
618
IEEE80211Report
SSID
RSSI
620
BldgFloorRoomReport
[Building
Floor
Room]
622
AddressReport
[CountryRegion
AdminstrativeDivision
SecondaryCity
PrimaryCity
PostalCode
AddressLine]
Description
FormattedAddress
InternalAddressLines
624
NamedLocationReport
[Name]
626
VelocityReport
Speed
SpeedUnit
632
CoordSystem
Code
SodeSpace
Edition
Descriptor
xyUnit
zUnit
angleUnit
634

FIG. 6

FIG. 7


Base.NestedElement
Extensions:Extension[0:*]
710
Location.Angle3D
a1:float[1:1]
a2:float[0:1]
a3:float[0:1]
720
Location.Matrix3D
A11:float[0:1]
A12:float[0:1]
A13:float[0:1]
A21:float[0:1]
A22:float[0:1]
A23:float[0:1]
A31:float[0:1]
A32:float[0:1]
A33:float[0:1]
722
Location.Position3D
x:float[1:1]
y:float[0:1]
z:float[0:1]
724
Location.PositionUncertainty
Statistics
726
Location.NonScalarString1024
value:nvarchar[0:1]
728
Core.CategorizedNestedElement
Categories:CategoryRef[0:*]
730
Location.SimpleUncertainty
AnglePrecision:float[1:1]
PointPrecision:float[1:1]
732
Location.StatisticalUncertainty
AngleCovarianceMatrix:Matrix3x3[0:1]
PointCovarianceMatrix:Matrix3x3[0:1]
734
Core.LocationReport
Confidence:float[0:1]
CreationTime:datetime[1:1]
736